IN THE SPECIFICATION

Replace the paragraph beginning at page 1, line 5, with:

The present invention relates to a sensor element, particularly to a sensor such as a magnetoresistance sensor, an air flow sensor, an acceleration sensor, a pressure sensor, a yaw rate sensor, or an image sensor having a constant area sensor face.

Replace the paragraph beginning at page 1, line 11, with:

Conventionally, an acceleration sensor, a yaw rate sensor, a pressure sensor, an air flow sensor, and a magnetoresistance sensor are used as sensor elements for controlling running of a vehicle. Among them, each of the acceleration sensor, the yaw rate sensor, and the pressure sensor includes a flat pivotally moving electrode (sensing portion) responding to impact or acceleration, and detecting a change in electric capacitance between the electrode and an opposed electrode fixedly arranged proximate the moving electrode. Further, various metal materials are used for the planar electrode constituting the sensing portion, for example, as described in Japanese Patent Laid-Open No. Hei. 5-183145, Japanese Patent Laid-Open No. Hei. 5-283712, or Japanese Patent Laid-Open No. Hei. 6-194382, a surface thereof is covered and protected by a silicon nitride film or a silicon oxide film, and these inorganic thin films are formed by sputtering, CVD, or another vapor deposition process.

After the paragraph beginning at page 4, line 6, insert as a heading:

Summary of the Invention

Replace the paragraph beginning at page 6, line 16, with:

Figs. 1A-1G are sectional views for explaining an example of a structure of a magnetoresistance sensor according to the invention and a method of fabricating thereof.

Replace the paragraph beginning at page 6, line 19, with:

Figs. 2A-2D are sectional views for explaining another example of a structure of a magnetoresistance sensor according to the invention and a method of fabricating thereof.

Replace the paragraph beginning at page 6, line 22, with:

Figs. 3A and 3B are views for explaining a structure of an air flow sensor of Embodiment 1 according to the invention in which Fig. 3A is a plane view and Fig. 3B is a sectional -25 view taken along a line IIIB-IIIB of Fig. 3A..

Replace the paragraph beginning at page 7, line 1, with:

Figs. 4A and 4B are views for explaining a structure of an acceleration sensor of Embodiment 3 according to the invention in which Fig. 4A is a plane view and Fig. 4B is a sectional view taken along a line IVB-IVB of Fig. 4A.

Replace the paragraph beginning at page 12, line 2, with:

Fig. 1A through Fig. 1G are sectional views for explaining an example of a method of fabricating the magnetoresistance sensor according to the invention. First, above the sensor main body 1, there is coated varnish prepared by dissolving silicone polymer shown by the above-described general formula (1) and/or general formula (2) in a solvent of alcoholic species, ketone species, ether species, halogen species, ester species, benzene species, alkoxybenzene species, or cyclic ketone species by a film thickness of 10 nm through 50 μm, a heat treatment is carried out at 100°C through 250°C above a hot plate, and the silicone resin film 2 is formed above the sensor main body 1 (Fig. 1A).

Replace the paragraph beginning at page 12, line 14, with:

Next, there is applied an i-line positive resist 3 having a film thickness of 100 nm through 20 pm on the surface of the silicone resin film 2 (Fig. 1B), ultraviolet light (i-line) is irradiated through a mask 4 having a contact hole pattern for exposing the bonding pad le or dicing lines (not illustrated) of the sensor main body 1, and the i-line positive resist 3 of the contact hole portion is exposed (Fig. 1C).

Replace the paragraph beginning at page 12, line 22, with:

Next, developing processing is carried out after carrying out a baking operation after exposure to thereby provide a pattern of the i-line positive resist 3 having a desired pattern (Fig. 1D).

Replace the paragraph beginning at page 13, line 1, with:

With the pattern of the i-line positive resist 3 as a mask, contact holes are provided by developing the silicone resin film 2. The developing processing is carried out by carrying out dipping development or spinning development by a developer exclusive for the silicone resin film and thereafter cleaning by a rinse solution exclusive for the silicone resin film (Fig. 1E).

Replace the paragraph beginning at page 13, line 8, with:

Next, after removing the passivation film lf by a dry etching process (Fig. 1F) , the i-line positive resist 3 above the silicone resin film 2 is removed in a wet state or removed in a dry state by using a reactive ion etching apparatus, an ion beam etching apparatus, or an ashing apparatus, and by using an oven or a hot plate, postbaking is carried out at 200°C through 450°C to thereby cure the silicone resin film 2. Thereby, there is provided the magnetoresistance sensor covered with the silicone resin film 2, a predetermined portion of which is opened (Fig. 1G).

Replace the paragraph beginning at page 18, line 12, with:

Fig. 2D is a sectional view explaining another example of a magnetoresistance sensor according to the invention. Although the constitution of the sensor main body 1 is the same as that of Fig. 1G, above the sensor main body 1, there is formed a silicone resin film 13 which is photocured to cover at least the sensing portion.

Replace the paragraph beginning at page 18, line 22, with:

Figs. 2A through 2D are sectional views for explaining another example of a method of fabricating a magnetoresistance sensor according to the invention. The method of fabricating the magnetoresistance sensor differs from the above-described method in that there is used a compound prepared by dissolving a polymer having a photocrosslinking characteristic in a solvent and adding a photocrosslinking agent or a photopolymerization agent thereto. The silicone resin film is cured by irradiating and exposing through a mask 5 having a desired pattern, removing the silicone resin film at a portion which is not irradiated with light by developing, and postbaking at 100°C through 250°C (Figs. 2B and C). When the passivation film 1f is removed by the dry etching process, there is provided the magnetoresistance sensor covered with the silicone resin film 13 which is cured optically and a predetermined portion of which is opened (Fig. 2D).

Replace the paragraph beginning at page 20, line 10, with:

Figs. 3A and 3B illustrate views for explaining a structure of an air flow sensor of Embodiment 1 according to the invention in which Fig. 3A is a plan view and Fig. 3B is a sectional view taken along a line IIIB-IIIB of Fig. 3A.

Replace the paragraph beginning at page 24, line 5, with:

Fig. 1G is a sectional view for explaining a structure of a magnetoresistance sensor of Embodiment 2 according to the invention. The passivation film 1f of the sensor main body 1 is a silicon nitride film having a film thickness of about 800 nm formed by a sputtering apparatus and the silicone resin film 2 was formed on the surface of the passivation film 1f by the following method.

Replace the paragraph beginning at page 25, line 18, with:

Figs. 4A and 4B are views for explaining a structure of an acceleration sensor of Embodiment 3 according to the invention in which Fig. 4A is a plan view and Fig. 4B is a sectional view taken along a line IVB-IVB of Fig. 4A.

Replace the paragraph beginning at page 28, line 22, with:

When operation of the acceleration sensor covered with the silicone resin film 45 was confirmed, in accordance with acceleration, the sensing portion 43 was displaced in a direction in which the distance between the sensing portion 43 and the opposed electrode 44 is changed (arrow direction of Fig. 4A). The change in the interval between the side face of the sensing portion 43 and the side face of the opposed electrode 44 was detected as a change in the capacitance and it was verified that there was provided a sensitivity of a sufficiently practical level.